

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY
(CHAPTER I OR CHAPTER II
OF THE PATENT COOPERATION TREATY)
(PCT Rules 44bis.3(c) and 72.2)

To:

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13. Sep. 2006

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IMPORTANT NOTIFICATION

Date of mailing (day/month/year)

08 September 2006 (08.09.2006)

Applicant's or agent's file reference

P21115-WO

International application No.

PCT/EP2004/052113

International filing date (day/month/year)

09 September 2004 (09.09.2004)

Applicant

ALUMINAL OBERFLÄCHENTECHNIK GMBH & CO. KG et al

1. Transmittal of the translation to the applicant.

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

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The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

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TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P21115-WO	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/EP2004/052113	International filing date (day/month/year) 09.09.2004	Priority date (day/month/year) 27.09.2003
International Patent Classification (IPC) or national classification and IPC C25D3/42, C25D3/56		
Applicant ALUMINAL OBERFLÄCHENTECHNIK GMBH & CO. KG		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 8 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/052113

Box No. I

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-11 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. 1-20 _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* _____ received by this Authority on _____
- nos.* _____ received by this Authority on _____
- ☐ the drawings:
- sheets _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	4, 5, 12	YES
	Claims	1-3, 6-11, 13-20	NO
Inventive step (IS)	Claims		YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
1. This report refers to the following documents:			
D1: WO 00/32847 A (MEHLER KLAUS DIETER; STUDIENGESELLSCHAFT KOHLE MBH (DE); LEHMKUHL), 8 June 2000 (2000-06-08)			
D2: WO 02/088434 A (FISCHER JUERGEN K S; ALUMIPLATE INC (US)), 7 November 2002 (2002-11-07)			
D3: US 4 778 575 A (MAYER ANTON), 18 October 1988 (1988-10-18)			
D4: GB 1 365 009 A (SIEMENS AG), 29 August 1974 (1974-08-29)			
2. Document D1 (see pages 4 to 7 and the examples) discloses electrolytes for aluminium-magnesium alloy deposition, containing $M[AlR_4]$ and AlR_3 in an aromatic solvent (e.g. toluene), where M can be a mixture of, for example, potassium and sodium. Document D4 (see page 3, lines 91 to 100) describes in general the production of magnesium alkyl compounds in organometallic electrolytes (especially those containing aluminium trialkyl or aluminium triethyl), with electric polarisation being carried out in the presence of a magnesium anode. Thus, after a certain			

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

pre-electrolysis period, the electrolytes of D1 also contain magnesium alkyl compounds. To a person skilled in the art this is obvious (for example, from the teaching of D4). D1 also discloses (see pages 4 to 7 and the examples) electrolytes and their use for aluminium-magnesium alloy deposition.

2.1 INDEPENDENT CLAIM 1

Thus it is clear that these electrolytes also contain magnesium alkyl compounds. This in turn means that electrolytes as claimed in claim 1 of the application are already known from the prior art. D1 discloses an electrolyte that has all the features specified in independent claim 1. The subject matter of this claim therefore lacks novelty (PCT Article 33(2)).

2.2 INDEPENDENT CLAIM 9

D1 appears to disclose all the features of independent claim 9 in combination with each other. The subject matter of this claim therefore lacks novelty (PCT Article 33(2)). However, if it is considered that magnesium alkyl compounds do not contain the group of magnesium-aluminium-alkyl complexes, the subject matter of claim 9 can indeed be regarded as novel over D1.

2.3 INDEPENDENT CLAIM 16

D1 discloses all the features of independent claim 16 in combination with each other; in other words, an electrolyte for producing aluminium-magnesium alloy

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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layers. The subject matter of this claim therefore lacks novelty (PCT Article 33(2)).

2.4 INDEPENDENT CLAIM 18

D1 discloses all the features of independent claim 18 in combination with each other; in other words, the use of electrolytes as specified in D1 to produce aluminium-magnesium alloy layers. The subject matter of this claim therefore lacks novelty (PCT Article 33(2)).

2.5 INDEPENDENT CLAIM 19

It is clear from claim 20 that the electrolysis kit is in fact an electrolyte as claimed in claim 1. Since D1 discloses all the features of independent claim 1 in combination with each other, the subject matter of claim 19 also lacks novelty (PCT Article 33(2)).

3. Document D2 (see Table 4) discloses electrolytes for aluminium-magnesium alloy deposition, containing $M[AlR_4]$ and AlR_3 in an aromatic solvent (e.g. toluene), where M can be a mixture of, for example, potassium and sodium. It is shown in D2 (see page 9, lines 15 to 19) that when magnesium alkyl compounds are present in the organometallic electrolyte, magnesium-aluminium alloys are deposited. The magnesium alkyl compounds are introduced by electric polarisation of a magnesium anode. Thus, after a certain pre-electrolysis period, the electrolytes of D2 also contain magnesium alkyl compounds. D2 also discloses (see

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citations and explanations supporting such statement

page 9, lines 12 to 19) electrolytes and their use
for aluminium-magnesium alloy deposition.

3.1 INDEPENDENT CLAIM 1

Thus it is clear that these electrolytes only deposit aluminium-magnesium alloys when the concentration of magnesium alkyl compounds in the electrolyte is sufficiently high. This in turn means that electrolytes as claimed in claim 1 of the application are already known from the prior art. D2 discloses all the features of independent claim 1 in combination with each other. The subject matter of this claim therefore lacks novelty (PCT Article 33(2)).

3.2 INDEPENDENT CLAIM 9

D2 discloses all the features of independent claim 9 in combination with each other. The subject matter of this claim therefore lacks novelty (PCT Article 33(2)).

3.3 INDEPENDENT CLAIM 16

D2 discloses all the features of independent claim 16 in combination with each other. The subject matter of this claim therefore lacks novelty (PCT Article 33(2)).

3.4 INDEPENDENT CLAIM 18

D2 discloses all the features of independent claim 18 in combination with each other. The subject matter of this claim therefore lacks novelty (PCT Article 33(2)).

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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4. In claim 16 the product is defined in terms of the process by which it is produced. Electrolytes for depositing aluminium-magnesium alloy coatings are generally known (see, for example, document D3, claims 9 to 11 and the examples) and therefore lack novelty. The process by which a product is produced is not normally regarded as part of the product. The fact that a known product can be produced by another process, more particularly a novel process, does not make the product itself novel. Moreover, in this context the phrase "can be produced" is understood to mean that the claimed electrolyte is produced either by the claimed process or in another way.

4.1 INDEPENDENT CLAIM 16

Thus D3 discloses all the features of independent claim 16 in combination with each other. The subject matter of this claim therefore lacks novelty (PCT Article 33(2)).

5 DEPENDENT CLAIMS 2-8, 10-15 AND 20

Dependent claims 2 to 8, 10 to 15 and 20 do not appear to contain any features that meet the PCT requirements in respect of novelty or inventive step when combined with the features of any of the back-referenced claims. It is not clear whether a combination of claim 5 and claim 1 would meet the PCT requirements in respect of inventive step with respect to D1 or D2.

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

In claim 16 the product is defined in terms of the process by which it is produced. Electrolytes for producing aluminium-magnesium alloy layers are generally known (for example, from documents D1, D2 and D3) and therefore lack novelty. The process by which a product is produced is not normally regarded as part of the product. The fact that a known product can be produced by another process, more particularly a novel process, does not make the product itself novel. Moreover, in this context the phrase "can be produced" is understood to mean that the claimed electrolyte is produced either by the claimed process or in another way.